

Illinois Mathematics and Science Academy

1500 West Sullivan Road
Aurora, Illinois 60506-1039
312/801-6000

Director

Dr. Stephanie Pace Marshall

Board of Trustees

Dr. Nancy Cole
Dean of College of Education
University of Illinois

Dr. LeRoy Duckworth
Superintendent

East St. Louis School Dist. 189

Ms. Sheila Griffin
Marketing Executive
Motorola Incorporated

Mr. Gary D. Jewel
Superintendent of Schools
Aurora West School Dist. 129

Dr. Leon Lederman
Director

Fermi National Accelerator Laboratory

Mr. John Marion

President

International Brotherhood of Electrical Workers

Dr. Walter Massey
Vice President for Research and for Argonne
National Laboratory, University of Chicago

Mr. John McEachern, Jr.
President

Wayne Circuits Incorporated

Dr. David Mintzer
Special Assistant to the President
Northwestern University

Mr. James D. Pearson
President

Aurora Industries

Dr. David R. Pierce
Executive Director
Illinois Community College Board

Dr. Anthony Sadowski
Vice President

Nalco Chemical Company

Mr. Ted Sanders
State Superintendent of Education

Ms. Barbara Schmulbach
Teacher of Mathematics
Carbondale Community High School

Mrs. Elise Scott
Teacher of Chemistry
Mattoon High School

Mr. Jesus Manual Sosa
Principal
Clemente High School, Chicago

Dr. Richard D. Wagner
Executive Director
State Board of Higher Education

Editor

Naomi Geltner

NOVA is published five times a year by the
IMSA Communications Office.



The pioneering staff and faculty of the Illinois Mathematics and Science Academy.

Dear Member of the Academy Community,

Welcome to the first edition of the Illinois Mathematics and Science Academy's newsletter! The Illinois Mathematics and Science Academy is a three-year residential school for students gifted in mathematics and science. The Academy was created as part of Senate Bill 730, the Comprehensive Educational Reform Bill in Illinois, and opened on September 7, 1986, with 210 of the state's brightest students.

According to our legislation, students receive their education at the Academy without charge for housing, food service, or tuition. The Academy offers a comprehensive program in mathematics, science, social science, English, and foreign language. Presently, instruction is offered in French, Spanish, German, Latin, and Russian. Beginning with the 1987-1988 school year, we will be offering a program in Japanese language and

culture, and hope to expand our non-Western language instruction by adding Mandarin Chinese the following year. Programs in fine and performing arts are being developed, and our cocurricular interscholastic program in athletics and other academic activities is being expanded.

The Academy presently has the equivalent of fifteen teachers. All full-time teachers have a minimum of a master's degree in their respective subject area, and almost 30 percent have a Ph.D. in their field. All faculty and staff are employed on one-year contracts.

The Academy is located near the I-55 High Tech Corridor, encompassing Aurora, Batavia, and Naperville within forty miles of Chicago's vast cultural and educational assets. The area has seen an explosion of recent growth.

The Illinois Mathematics and Science Academy is located on a 93-acre campus

continued on next page

continued from page 1

within the city limits of Aurora. The \$14 million campus was completed in 1978 by the Aurora West School District. It was closed in 1981 because of declining enrollments and will be purchased from the West Aurora School District by the Board of Trustees of the Academy.

At the present time there are only three public residential schools in the country for students gifted in math and science. These include the North Carolina School of Science and Mathematics and the Louisiana School of Mathematics, Science, and the Arts. Of these three residential schools, the Illinois Mathematics and Science Academy is the only three-year school and has the most modern facilities. The building has 125 modular classrooms, a large information resource center, a small theatre, music and art rooms, and a specially designed greenhouse. In addition, the Academy has three large gymnasiums and a competition-sized pool.

Two residential dormitories will be completed for student use in April, 1987; at the same time, we will break ground for three additional dormitories for our incoming students in the 1987-1988 school year. Our student population for 1987-1988 is expected to be approximately 500.

To supplement our academically rigorous program, students will work with scientists, researchers, educators, and engineers at Fermilab, Argonne National Laboratory, A.T.&T. Bell Laboratories, Amoco Research, Nalco, and other high tech companies, research institutions, and universities in our area.

In addition to professional mentors and tutors, students will have access to the University of Illinois' Cray Super Computer and the PLATO system. We are in the process of developing a completely merged library/computer center.

The principal mission of the Illinois Mathematics and Science Academy is to provide an exemplary academic program for our "apprentice investigators" within an environment that fosters inquiry, creativity, imagination and risk-taking. However, the Academy will also be a catalyst for the improvement and enhancement of science and mathematics teaching in Illinois, by serving as a laboratory for curriculum and instructional inquiry and development. As a pioneering academic community, the Academy will serve as an outreach center for program and material development



Dr. Marshall talks with Andy Bagnato, Tribune Reporter.

and teacher training.

The nation is facing a critical shortage of citizens trained in the fields of science, mathematics and technology.

The State of Illinois has an obligation to the nation and to its own citizens to develop the human resources necessary for economic leadership in a post-industrial society. The Illinois Mathematics and Science Academy is prepared to address this very broad challenge by nurturing creative excellence in students of science and mathematics.

The opening of the Illinois Mathematics and Science Academy represents the beginning of a bold new venture in education in Illinois, and we are confident

that the Academy will make a difference in the lives of our students and in the improvement of mathematics and science education in our state.

The Academy is a state-wide institution. Your insights and suggestions will be enormously helpful as we continue to shape the culture and program of this institution. As a citizen of Illinois, we invite your inquiry and participation in our state's most unique educational venture.

James D. Pearson, President
Board of Trustees

Stephanie P. Marshall, Ph.D.
Director

New York Studies Academy Concept

The state of New York is among several states that are studying the concept of a public residential school for the gifted. Governor Mario Cuomo recently sent a representative on a fact-finding tour of the Illinois Mathematics and Science Academy. Jim Miller, Deputy Commissioner of Commerce, visited with staff and the Student Council on Friday, February 6th.

Last month Governor Cuomo requested \$1 million to study the feasi-

bility of establishing a residential school in Long Island, New York. The proposal follows two years of preliminary studies by state officials attempting to develop regional training centers for the gifted. According to reports, the expense of establishing 19 regional centers under local school board jurisdiction prompted the move by Cuomo.

The Bronx High School of Science in New York served as one of the inspirations for the Illinois school. Only two other states have developed public residential schools - Louisiana and North Carolina. Other states considering a similar endeavor include Indiana, New Jersey, Oklahoma and Maryland.

IMSA Math Teacher Attends Math Symposium



"There is a difference in attitudes and expectations between the Japanese and the American students," says Sue Eddins, math teacher. She says those were the biggest issues that kept recurring at the Symposium on International Comparisons of Mathematics Education that released additional information on the topic. (See related article.)

The symposium included presentations from four major cross-cultural studies: The Second International Mathematics Study (SIMS), U.S. Summary Report, The International Association for the Evaluation of Educational Achievement, Mathematics Learning in Japanese, Chinese and American Classrooms and math text translation of Dr. Isaak Wirsup.

Sue Eddins, IMSA Math Teacher

One of the studies was of kindergarten, first and fifth grade students by people at the University of Michigan and the University of Chicago. According to Eddins, that study included a lot of classroom observation. "In a Japanese classroom, presenting the idea of six minus four, a teacher could spend a whole period of mathematics on that one idea. He would begin every problem like that. . .presenting it as an application. And, he would ask students to make up problems that would have that as a representation. An American school would have done twenty-five problems, emphasizing the answer." Eddins says what was important in the Japanese classroom was not the answer, but the idea. "That was only at the elementary level, but I think that carries on to the secondary level as well."

According to Eddins, the attitude of students, teachers and the general public plays a role in the level of achievement. "Those countries which tended to score extremely high, generally speaking, were not all that satisfied with their educational system. Of the teachers, parents and students interviewed in the U.S., all expressed satisfaction with the educational system. But when you look at the performance levels, they're not there." The consequence, she says, is complacency and almost no impetus to change.

Eddins was among 200 educators invited to participate in the conference, and says that the state of Illinois was well represented, not only among participants, but among the presenters as well. Those at the conference will now be expected to disseminate the information to their own schools and states. "The main thrust of the conference is for participants to try to get together with state and national leaders and produce a set of guidelines that might begin to influence policy and help improve mathematics education."

U.S. Students Mediocre in Math, National Study Says

American pupils badly trail their counterparts in Japan and China in the area of mathematics, according to a study of 18 nations co-authored by a University of Illinois mathematics professor. This information was released at an international math symposium recently in Washington, D.C.

According to the study, and author William Travers, unchallenging and pointlessly repetitious school curricula contribute to the low achievement of American students. "We're revisiting concepts," says Travers in an Associated Press article about math, "but we're not adding anything new."

The study disputes claims that American students are outperformed by other nations' students because of lack of sufficient time for instruction, large class size, or because of poorly trained teachers. Japan's average class sizes, according to the report, are about 43 for the 12th grade, while American schools

average 26. American students spend an average of 144 hours per year in math, compared to 101 for the Japanese.

According to Travers, America is beyond the quick-fix stage. "It's going to take a long-term commitment—at least 20 years—to turn things around." The report recommended renewed scrutiny of math textbook quality, increased status and rewards for math teachers, and improved professional development programs for teachers. It also calls for increasing the intensity of content in math classes.

"We need to make better use of the time that is available," Travers emphasized.

The Academy is carefully studying the results of this report as it continues to develop the Math Curriculum.

IMSA Fund Has First Director

An Aurora resident has been chosen to head the new foundation for the Illinois Mathematics and Science Academy. Alberta Solfisburg was officially hired as the Director for the IMSA Fund for Advancement of Education during its' Board of Directors meeting in February.

"I'm looking forward to just being at IMSA. It will be exciting to work at a pioneering educational facility," says Solfisburg. **"It will be exciting to sell IMSA, as an investment in our country's youth. . . as an investment in our country's future."**

Solfisburg started her new position Monday, February 9th, after serving as Associate in Development for Aurora University for ten years. In that period, she worked towards raising funds and

administering federal grants. Solfisburg replaces Interim Director, Borden Mace, who left in November to return to North Carolina.

"I think IMSA will be easy to market to investors," she adds, "because it is so unique." According to Solfisburg, the Fund hopes to raise \$15 million over a three-year period, for endowments, operating expenses and special projects. As Director, she plans to develop a program of planned giving and annual giving, as well as initiating grant proposals to foundations and the corporate sector. The Fund has so far received over \$400,000 in total contributions since its inception.

Solfisburg was born and raised in New Mexico and has lived in Aurora for over thirteen years. She has worked for more than 16 years in fund-raising activities. Prior to her position with Aurora University, she worked in grant-writing for Lewis University in Lockport, Illinois.

Life as a Resident Counselor

Working as a Resident Counselor at IMSA is quite different from similar positions at colleges or universities. Some of the primary duties the IMSA RCs have include advising students, as well as planning educational and social activities.

When IMSA first opened in September, the RCs worked with the students by helping them establish time schedules and even teaching some how to do laundry.

The RCs all have different educational backgrounds. Julie Freund grew up in a large family and is the oldest of eight children. She holds a B.A. in Physical Education from Aurora University. Her background has enhanced the recreation and sports activities at IMSA. Freund currently coaches the girls basketball team.

Head male Resident Counselor, Harold Cline has a Master's Degree in Divinity and served as a resident advisor at the North Carolina School of Science and Mathematics. The diversity of experiences results in a variety of activities and ideas for the new students. While the RCs come from different backgrounds, Freund and another female RC, Melissa Striegel agree that nothing can really prepare a person for doing the kind of work they do at IMSA.

According to Striegel, "when you're an RC in a situation like this **you do more than just enforce rules. We do a lot of counseling. It's more personal.**"

For the nine who have chosen to work in this unique residential environment, the rewards have been many and varied. "It's the little things, for me," says Striegel, "We get notes from the parents and phone calls thanking us for the job we're doing."

Off-campus sign-outs, curfew checks, housekeeping inspections and room care are issues not ordinarily addressed at most schools, but they are part of the daily routine for the Academy's RCs. They are the recreation directors, supervisors and the shoulders that students can cry on. If there is one characteristic that probably runs through all the RCs, it is that they love working with kids and, according to Striegel, "It helps to have a good sense of humor."

Student and Chemistry Teacher Invited to D.C.

An IMSA student and his chemistry teacher will attend a special Centennial celebration in Washington, D.C.

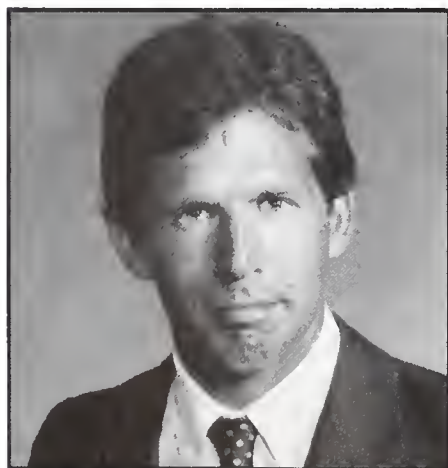
Mehmet Güler and chemistry teacher, Chris Kawa, of Batavia, were selected to attend the 100th Anniversary meeting of the National Institutes of Health.

NIH is sponsoring a Centennial Scholars and Teachers program to encourage the best young minds to consider careers in biomedical research. The program also

recognizes outstanding efforts by teachers.

Güler, of Anna, Illinois, was selected on the basis of his interest in the biomedical field. He selected Kawa as the teacher who most influences him in science. Kawa will accompany him to the special three-day event.

According to NIH, a major public television series is planned in connection with the observance.



Chris Kawa



Mehmet Güler

IMSA Student Profile

IMSA serves students who have completed the equivalent of the ninth grade. This year's class of 210 (120 males and 90 females) represents a sample of the state's brightest youngsters. They vary in age from 12 to 16.

State legislation requires that the student population reflect the ethnic, racial

and gender distribution of Illinois. The present class is 70% Caucasian, 10% Black, 15% Oriental, 3% Hispanic, and 2% from other ethnic groups.

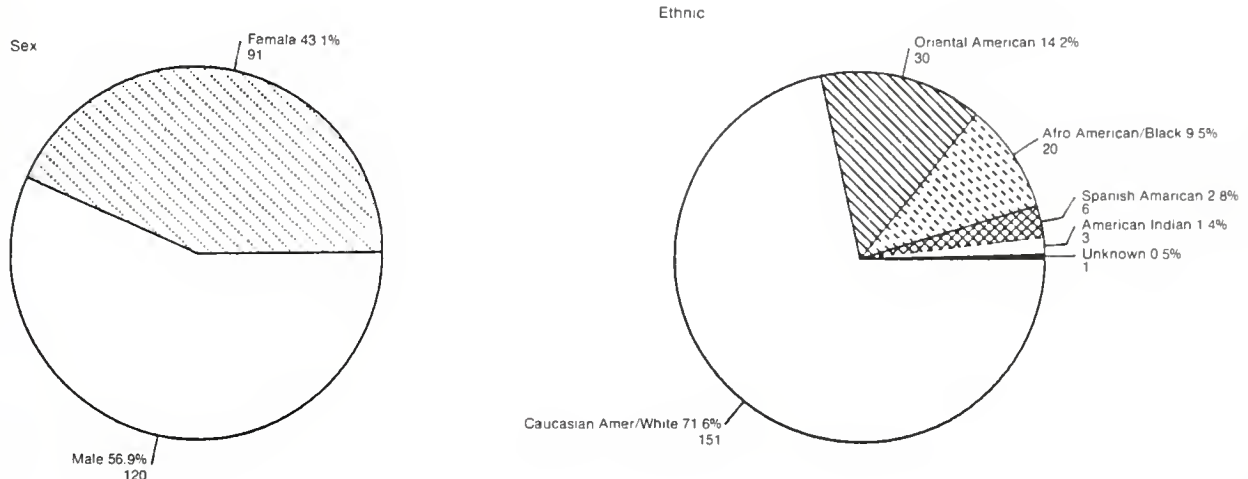
Fifty-five percent of the students are from the Chicago suburban area. Forty-five percent of the class come from other parts of the state.

The average Scholastic Aptitude Test (SAT) score for these students is 620 in

mathematics, and 537 in the verbal section. These scores are approximately 150 to 200 points higher than those of the average college-bound senior. The tests were taken by students as eighth or ninth graders.

The current class was selected from an application pool of 768. Approximately 300 students will be invited for the 1987-88 academic year.

ILLINOIS MATHEMATICS AND SCIENCE ACADEMY



IMSA Looks to New Student Scholars

The Illinois Mathematics and Science Academy is only six months old, but it is already preparing to enlist the class of 1990. About 11,000 application materials were mailed to school superintendents, principals, guidance counselors, and state legislators.

"We believe we did a terrific job last year in selecting our students and plan to use a similar strategy this year," says Dr. LuAnn Smith, Dean of Admissions. A committee of about 30 professionals in education and private industry screened the more than 750 applications that were submitted last year. According to Smith, the Admissions Office is hoping to enlist the same people for screening this year.

"This year teachers of mathematics and science, along with parents and counselors are asked to provide us with additional information. Students also have the opportunity to tell us about themselves and why they would like to be IMSA scholars," says Smith. She says they look for more than just high test

scores, and students are judged on an accomplishment-based rating system. "In comments, screeners are looking for exceptional mathematical or scientific abilities and reasoning through special projects or competitions."

After admission, all IMSA students will be studied, while in school and after they leave. That responsibility is also under Smith's direction. "We need to know how this environment affects these students and what is effective and what is not."

Entering students and their families were asked to complete background questionnaires before and after they arrived at IMSA. The information will be used to develop programs at this and other schools around the state. "We need to more fully understand cognitive development, . . . and how it differs among gifted students from the general population, and the different ways they display their exceptional ability."

She says that while there are many studies on the gifted child, there are not

many studies on large numbers of students at higher grade levels. According to Smith, "We want to look at factors that affect their future professional lives, such as family background, geographic characteristics, travel histories and outside reading interests." She says some of the information will not be meaningful until greater numbers of students are included in the study and until most are in a position to choose professional careers. But, the studies need to be started now, and in the short-run the Academy will be able to determine how student background affects study behavior at the Academy.

For now, Smith and the Admissions Office are engaged in getting information to schools around the state. Smith is on a speaking tour to schools and Educational Service Centers through the month of February. Students have until **April 1st** to complete applications. Anyone wishing information should call the Admissions office or the Academy at (312) 801-6000.

The Feeding, Caring and Sheltering of 205 Adolescents

Most parents can probably visualize the situation captured in our headline, so it should come as no surprise when Dean of Student Services, Cathy Veal says, "There is never a dull moment!" Few high schools have to contend with feeding, protecting and providing activities for students around the clock, in addition to developing a nurturing academic environment. At IMSA, the students and nine resident counselors live in converted labs and music rooms, while permanent dorms are being completed.

"The current living arrangements are less than ideal, but they have served to foster a tremendous camaraderie among the students," says Veal. Some students have even suggested that all future students be required to spend several weeks under similar conditions.

The nine resident counselors (RCs) provide care and supervision during non-academic hours. For the RCs, the position is not just a job, it's a lifestyle. "Every day is different", says Julie Freund. She adds that even on days off they are in demand. "Whenever you're in the building you're on duty."

Training the staff has been one of the biggest challenges faced by Dean Veal. She has had to train a novice staff and says, "Having them live in less than ideal conditions has been a challenge," and she adds, "We had to do it in less than a month." Veal came to IMSA from the North Carolina School of Science and Mathematics (NCSSM) after four years there.

"By the time I arrived at NCSSM, everything was already in place," she says. "The initial organizing makes this (situation) very different."

One of the other differences Veal finds at IMSA is that the three-year program offers greater potential for what can be done. According to Veal, "At NCSSM (students) spend the first year adjusting and the second year separating. Here at IMSA, we have a middle year, so I think that offers a whole new set of possibilities."

The students may possess special talents and unique characteristics that distinguish them from others the same age, but in many ways "they are still normal teenagers", according to Veal, "and they care about many of the same

kinds of things that other teenagers care about." She adds, "They are just as interested in whether or not they're going to get a date to the Saturday night

dance as whether or not they will do well on their Chemistry test tomorrow. They're also very interested in the latest fashions."



Above: Students relax after finals in their temporary dorm room. Photo by student Badrinath Rengarajan.

Below: Gary Cerefice makes himself "at home" in his temporary dorm room.



TRAILBLAZERS. . .

Abraham Lincoln came to life at IMSA through the dramatic portrayal by actor **James A. Getty**. Getty, a native of central Illinois, is a Lincoln scholar who brings the sixteenth president and Gettysburg address to the stage and classroom. That period of American History came before Academy students February 23rd. Getty's portrayal coincides with the study of the Civil War in the social sciences department.

In addition to the dramatic presentation by Getty, students studied that time period by taking on the roles of political leaders, officials, citizens and businessmen of that era. Students responded to situations as they believe their characters did in real life. The result is a first-hand experience of the escalation of political situations and war.

Role-playing has been a common classroom technique in the social science department as teachers encourage students to participate and "get the feel" for an historic period. An earlier class had students taking on opposing roles for a study of the Salem Witch trials. According to teacher **Bernie Hollister**, the role-playing was a study in fear and social politics.

The department also brought the **U.S. Constitution** to life for a recent Saturday Seminar. Students became members of the Senate and House of Representatives as they proposed and debated constitutional amendments. Students considered three amendments. One of the amendments would have extended voting privileges to other intelligent life-forms, such as porpoises. Another bill would have put a computer in every citizen's home making it convenient to vote on issues. Both bills were defeated. Teacher **Bill Stepien** says he expects to expand the constitutional concept to other interested schools (which would represent states). The project would develop into a long-term study and involve more students.



Renowned author and poet, **Frederick Turner** also brought his special talent to the staff and students of IMSA. Turner, currently Founders Professor of Arts and Humanities at the University of Texas in Dallas, has written several books of poe-

try and a comprehensive study, *Shakespeare and the Nature of Time*. Turner has been described as:

"...English and American; classical and modern; his poetry, at once dense and powerfully mysterious. . ." (Wesleyan University Press). Turner shared his expertise with IMSA staff on February 21, and with students for a required seminar on Saturday, February 22. Turner discussed his recent article "A Design for the New Academy" which appeared in a recent issue of *Harper's Bazaar*.

In preparation for Turner's visit, students prepared various scenes from Shakespeare's *The Tempest*. They made their presentation as part of the Saturday Seminar.



The **IMSA Math Team** is currently in sixth place in overall competition against 40 Chicago Metropolitan High Schools, after four meets. **The academy ranks number one in the Freshmen division and third in the Sophomore division.** Team coach **Chuck Hamberg** says he is very pleased with the team's showing, especially in their first year of competition with only a few months of preparation. According to Hamberg, the Chicago area is traditionally a powerhouse in math competition.

IMSA's strong showing is especially noteworthy since most members of the team have never competed before. IMSA students who have participated in competition include: **Frank Borrás, Brian Butler, Robert Chang, Sam Choi, Steve Collins, Amy Courtin, David Franklin, Peter Gast, Todd Groner, Mehmet Guler, Matt Hausken, Cheryl Heinz, Saunders Hsu, Paul Ivsin, Lillian Kao, Karen Kiener, Jordan Koss, Laura Kozlevcar, Frank Lai, Young Lee, Lydia Leong, Doug Lundquist, Eric Martell, Carrie Mokry, Steve Ramsey, Mark Smith, Wayming Wu, David Yung.** We'll have more on the team and the individual competitors in the next issue.

Dedication to the team, class and other responsibilities will prevent Hamberg from joining other math teachers around the state on an educational trip to China. He and other teachers were invited to participate in a three-week exchange of mathematics teaching ideas with Chinese educators in March. The trip is being coordinated through the **Illinois Council of Teachers of Mathematics.**



An official from **China** who supervises over 90,000 teachers in 3100 primary and secondary schools was among the many illustrious visitors to the Academy in its first few months. **Mr. Pan Hongxuan**, Secretary of Education in Shanghai toured the Academy in December. Mr. Hongxuan spoke to a few of the classes while visiting. The Chinese official and an interpreter were on a 30-day visit of the U.S., gathering ideas to help them as they revamp their educational system.

Other international visitors included a delegation of educators and officials from **Puerto Rico**, and last summer a delegation from **Israel** toured the Academy as part of their fact-finding tour of U.S. institutions.



A delegation from the state of **Utah** will tour IMSA in March. According to Dr. Ronald Sing of the Jordan School District in Salt Lake City, board officials have charged the four-member party with gathering information on housing students, curriculum programs, and vocational programs. The group plans to visit four other Chicago-area schools.



Five IMSA students are participating in a national project. **Frank Borrás, Peter Gast, Jill Mitchell, Doug Turnbull and Terri Willard** are working on an emulsion experiment design for **Project S.H.A.R.E. (Southern Hemisphere Aerostat Research Expedition)**. The project is a lighter-than-air balloon launch in the Southern Hemisphere. Its purpose is to circumnavigate the globe, or at least extend the current records.

The students are working with **Dr. Drasco Jovanovich, of Fermi National Accelerator Laboratory** in designing an experiment to be carried on the balloon. It will involve preparing emulsions, which are similar to photographic films, then flying them in the balloon at about 20,000 feet. Cosmic rays will strike the emulsions and the tracks can be measured and counted microscopically. The tracks might lead the students to insight on the tracks and possibly new scientific discoveries. The students will also be working in conjunction with a team of scientists from Ohio State University and

continued on next page

continued from page 7

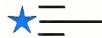
several scientists from Japanese universities.



Kris Gerhard of Freeburg, Illinois is applying for a Young Scholars grant through the National Endowment for the Arts. According to her history teacher, **Bernie Hollister**, Gerhard's proposal calls for updating the history guide for her hometown of Freeburg. Announcements on the grants should be forthcoming this month.

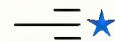


History teacher, **Bernie Hollister** will be travelling to Williamsburg, Virginia on a fellowship grant to study the Constitution. Hollister is involved in the research and planning for the **Bicentennial** celebration of the historic document.



"Coping with Stress" was the topic of a program for all students on February 23rd. The workshop was coordinated through social worker **Cheryl McGuirk**, who invited family therapist **Jim Weaver** as a speaker. The program included

group discussion to aid students in developing creative ways to handle stress.



IMSA is sponsoring a **Jump Rope for Heart** event April 12th in the afternoon. The fundraiser, which will involve teams of students and faculty, will benefit the Heart Association of Illinois. Coordinators Sue Bernal (IMSA Nurse), Tim Ritchie (Physical Education), Jeff Young and Badrinath Rengarajan, are looking for volunteers and/or sponsors.



JUMP ROPE FOR HEART



American
Heart
Association
in Illinois



Illinois Association
For Health,
Physical Education
& Recreation



Illinois Mathematics and Science Academy
1500 West Sullivan Road
Aurora, Illinois 60506-1039

NON PROFIT ORG.
BULK RATE
U.S. POSTAGE
PAID
AURORA, IL
PERMIT NO. 129

Illinois Mathematics and Science Academy

1500 West Sullivan Road
Aurora, Illinois 60506-1039
312/801-6000

Director

Dr. Stephanie Pace Marshall

Board of Trustees

Dr. Nancy Cole
Dean of College of Education
University of Illinois

Dr. LeRoy Ducksworth
Superintendent
East St. Louis School Dist. 189

Ms. Sheila Griffin
Marketing Executive
Motorola Incorporated

Mr. Gary D. Jewel
Superintendent of Schools
Aurora West School Dist. 129

Dr. Leon Lederman
Director
Fermi National Accelerator Laboratory

Mr. John Marion
President
International Brotherhood of Electrical Workers

Dr. Walter Massey
Vice President for Research and for Argonne
National Laboratory, University of Chicago

Mr. John McEachern, Jr.
President
Wayne Circuits Incorporated

Dr. David Mintzer
Special Assistant to the President
Northwestern University

Mr. James D. Pearson
President
Aurora Industries

Dr. David R. Pierce
Executive Director
Illinois Community College Board

Dr. Anthony Sadowski
Vice President
Nalco Chemical Company

Mr. Ted Sanders
State Superintendent of Education
Ms. Barbara Schmulbach

Teacher of Mathematics
Carbondale Community High School

Mrs. Elise Scott
Teacher of Chemistry
Mattoon High School

Mr. Jesus Manual Sosa
Principal
Clemente High School, Chicago

Dr. Richard D. Wagner
Executive Director
State Board of Higher Education

Editor

Naomi Geltner

NOVA is published five times a year by the
IMSA Communications Office.

IMSA's First Year—A Blue Ribbon Finish!

Academy teams and individuals scored several wins recently, giving the school some first-time major victories in its short nine-month history. The Chess team gave IMSA its first state title. The Math team took the state first place trophy in the freshman Algebra I division and the sixth place trophy overall. A Future Problem-Solving team headed for state finals, and six history projects submitted to the Chicago Metro History Fair entered the finals competition in Chicago. Students also scored well in two language tests. The wins have given IMSA students a terrific boost in this, their first year of academic competition! The following articles cover some of our bright young stars!



Some members of the IMSA Math Team. Left to right: Mark Armantrout, Paul Irsin, Mehmet Guler, Todd Groner, Steve Collins, David Joerg, Jordan Koss, Lydia Leong, Eric Martell. (See Math Team article below.)

Chess Team Takes State!

IMSA's Chess team is the new Class A state champ and the first team to give the Academy a state title! The five-member team competed against 20 other schools for the top spot in the State Chess Tournament held at University High in Urbana in late March. IMSA was ranked eighth in the tournament with teams competing in six rounds over two days.

Team Coach Krist Enstrom credits low pressure and a lot of sleep with helping the team on the way to the state cham-

Math Students and Teams take Top Honors!

An IMSA student is the top freshman mathematician in the state and several math teams took top honors in a recent competition. **Steve Collins (Waukegan)**, outscored several hundred other students to win first place in the Freshman Algebra written test. The test was part of the Illinois Council of Teachers in Mathematics math contest held in early May. Collins and 1700 of the state's best high school math students competed in

continued on page 3

continued on page 3



From the Director

Dear Members of the Academy Community,

The last few months have been exciting ones for IMSA as we close our first pioneering year. Our academic and sports teams have done exceedingly well, surpassing the expectations of many, including our own students. A special awards assembly in June recognized the efforts and achievements of our students and staff.

May was a time for us to formally recognize those who have supported us through contributions of financial and material resources or time during this first important and critical year. An Open House on May 3rd brought many of our special sponsors and contributors to the Academy. Equally as important as the gifts, is the trust and investment those contributions represented to us.

Our contributors this year joined others in the IMSA community as "risk takers," since they gave to something yet unproven. These commitments bind all of us involved with IMSA. All have invested a part of themselves in the belief that this school will make a significant contribution to the children and teachers of Illinois.

The collective generosity of our contributors has given us reference books, modems, magazines, computers, art work and much needed funds. For their individual contributions we are deeply grateful.

We in turn are committed to live up to those expectations and those investments. As you may note in some of this month's Nova articles, our Math team finished sixth in the state, winning one first place trophy. Our Chess team is the new state champion and some of our other teams are on their way to finals competitions. Many of our teachers have also received recognition through fellowships or through the publication of articles, and this is only our first year!

We are also attracting national and international attention. Officials from the states of New York, New Jersey, Indiana, Utah, Florida, Nebraska and Minnesota have been in contact with us or have visited to study the feasibility of establishing similar schools in their states. Mississippi recently passed legislation establishing a residential school for the gifted in that state. Representatives from Korea, Puerto Rico, China and Greece have also visited us. A school district in Canada is exploring a similar school concept and a TV production group from Australia is considering featuring the Academy in their documentary. We like to think that the spotlight is not only on IMSA, but on our entire state, as a demonstration of what we value in Illinois!

At the May 3rd Open House program I closed with one of my favorite poems by R. L. Sharpe:

*Isn't it strange
That princes and kings
And clowns that caper
In sawdust rings
And common people
Like you and me
Are builders for eternity?

Each is given a bag of tools,
A shapeless mass,
A book of rules;
And each must make
Ere life is flown,
A stumbling block
Or a stepping stone.*

All of you who have been our friends and supporters have been our stepping stones this year, and for this we say — thank you! IMSA won't let you down!

Stephanie P. Marshall, Ph.D.
Director

Chess (continued from page 1)

pionship. "Some of the other coaches complained that their kids had stayed up late. . . our team was in bed by 8:30. We took the tournament seriously," he says, "but pressure was low and we kept everything light. **Some of the coaches there said it was one of the toughest tournaments they've had in ten years.**"

According to Enstrom, the team is no stranger to victories, having had a 10-2 season against all Class AA schools. He says IMSA also had one of the toughest schedules at the tournament, having to face the 1st, 2nd, 4th, 5th and 9th ranked teams.

The five team members who earned their positions on the team through competitions include: **Ray Dames (Wilmington)**, **Karl Koschnitzke (Aurora)**, **Doug Lundquist (Rockford)**, **Doug Turnbull (Urbana)**, and **John Hoesley (Chicago)**. **Krist Enstrom, an IMSA Resident Counselor is from Delavan, Wisconsin.**



Left to right: Doug Turnbull, John Hoesley, Coach Krist Enstrom and Karl Koschnitzke ponder the next move.

Math (continued from page 1)

the final round of the seventh annual ICTM competition held at Illinois State University in Normal, Illinois.

Jordan Koss (Northbrook) took fourth place in the same division with **David Joerg (Batavia)** placing ninth. This is the first year IMSA students have competed in the match competition.

The Academy took sixth place overall in the state in Division AA, intended for schools with 750 or more students enrolled. The final round included the winners of competitions held recently at 19 regions throughout the state. Students competed in 13 events including algebra, geometry, trigonometry and pre-calculus to reach the finals. The contest featured written, team, relay and oral events.

The Junior-Senior relay teams took first and eighth place, with the first place team beating all participating schools in the competition. The IMSA team consists mainly of sophomore-level students. Members of the first place team were: **Steve Collins (Waukegan)**, **Gabriel Demombynes (Hinsdale)**, **Karen Kiener (Palatine)** and **Lillian Kao (Elmhurst)**. Placing eighth in the same category were: **Amy Courtin (West Chicago)**, **Todd Groner (Marion)**, **Carrie Mokry (Hoffman Estates)** and **Laura Kozlevcar (Peoria)**.

IMSA teams also took second place in the Algebra I written test and sixth in the Algebra II. Members of the team in addition to **Collins, Koss and Joerg** were: **Eric Martell (Schaumburg)**, **Matt Hausken (Lombard)** and **Paul Lee (Peoria)**.

"We are competing. . . in one of the toughest, if not the toughest, leagues in the state."

An eight-person team qualified for fourth place in the frosh-soph division. Students **Koss, Joerg, Martell and Hausken** participated as did: **Mehmet Güler (Anna)**, **Sam Choi (Lisle)**, **Amy Courtin (West Chicago)**.

Paul Ivsin (Elk Grove Village) and **Saunders Hsu (Charleston)** took their two-person Frosh-Soph team to a fourth place finish. The Frosh-Soph relay team captured seventh with **Hausken, Koss, Güler and Choi** participating in that event.

The Algebra II team came in sixth with members **Demombynes, Hsu, Groner, Kozlevcar, Mokry and Lori Buetow (Crete)**.

The competition, co-sponsored by the Illinois Council of Teachers in Mathematics and the CNA Insurance companies, wrapped up months of coaching among 6,000 students from almost 300 high schools entering the competitions.

The IMSA math students have been doing well in math competitions all year. After five meets in the North Suburban Math League, the IMSA team took the first place trophy in the Freshman division; third place in the Sophomore division and sixth place trophy in overall competition. Students competed in topics such as algebra, geometry, problem-solving and oral presentations.

"I'm very pleased with our showing this first year, especially since many of our kids have never competed before," says Chuck Hamberg. "We are competing against 40 other Chicago Metropolitan area high schools in one of the toughest, if not *the* toughest, leagues in the state." The math department has much to be proud of, as students also did well in the American High School Math Exam giving IMSA its first state ranking at 15th place. (See related article, page 6).

History Fair

Ten students who entered the Chicago Metro History Fair entered the finals competition. The students submitted six research projects for the Chicago finals at the Newberry Library. A total of eight projects were presented previously at regionals held at Oakton Community College in Des Plaines against 25 other high schools.

"We did admirably," comments teacher **Bernard Hollister (Glen Ellyn)**. "It was our first competition and we were the new kids on the block. We did well, and we learned a lot." It was Hollister's first time coaching students for the History Fair.

Among the six projects was a live performance by **Lisa Green (Bolingbrook)**. Using six hats as props, Green presented her own one-woman creation of "Perspectives on the Working Women during World War II." Green was the only IMSA entry in the performance category, and one of only a few opting for a live presentation, rather than a videotaped version.

Other projects by IMSA students were in the exhibit category and one essay. The exhibits and Green's performance made it to the finals, including a project by **Andrew Chen (Charleston)** on "The Influenza Epidemic of 1918." Hollister says he was surprised to learn not much had been written about the epidemic from the Chicago perspective at previous fairs. In his research, Chen explores where the virus first began and where it began in Chicago. The outbreak was the last major pandemic experienced by Chicago, with as many as 50,000 area residents losing their lives.

A project by **Lillian Kao (Elmhurst)** and **Portia Blume (Utica)** featured the widow of one of the victims of the Haymarket Square riots. Their exhibit on "Lucy Parsons: The Most Dangerous Woman in Chicago" dealt with a different perspective on the infamous event. Lucy Parsons, a black woman, was married to Albert Parsons, one of the Haymarket rioters who was later hanged. She went on to become a significant fig-



Nick and Chris Bullinger, Portia Blume and Lillian Kao with their projects at the Chicago Metro History Fair in the State of Illinois Building.

ure in Chicago History as one of the early feminists and close associate of Emma Goldman. Parsons could always be found in the forefront of demonstrations supporting the working class.

"That's what it's all about," says Hollister, "having the kids use their imagination for research and having them be as creative as possible for the exhibition of that research."

Gail Tulchinsky (Chicago) focused her research on the Fermi National Accelerator Laboratory for "Fermilab's Contributions to Society." (One of the librarians from Fermi, May West, worked closely with Gail on her project, picking her up and staying with her while she researched information in Fermilab's archives.)

Nick Bullinger and Chris Bullinger (Sleepy Hollow) conducted extensive interviews with the Haeger family for their project "Haeger Potteries." They borrowed artifacts and pictures from the family for their exhibit.

Mark Armantrout (Mattoon) and **John Dexter (Crescent City)** exhibited "Motorola: Changing products in Changing Times." The pair had information and a computer chip for their exhibit. They also had an old Motorola radio.

Derek Wolfgram (Aurora) put together an exhibit on "The Tribune Tower Stones: Their Origin and Acquisition." Derek took his own pictures of some of the celebrated stones, captioned the photographs with background on the items, and used a world map to depict the origins of the stones.

"That's what it's all about," says Hollister, "having the kids use their own imagination for research and having them be as creative as possible for the exhibition of that research." He adds, "We learned a lot at the Fair. Now we can better prepare for next year's competition." Only themes dealing with the work place went on to state finals.

Future Problem-Solvers

An Academy team took the state rookie award in the finals competition of the Future Problem-solving tournament held at Illinois State University in May. The five-member team was cited as the one accomplishing the most in its first year of competition. IMSA was also the only school with two students placing in the top ten in individual competition. The team, consisting of **Portia Blume (Utica)**, **Kelly Cahill (Aurora)**, **Sophia Davenport (Macomb)**, **Kris Gerhard (Freeburg)** and **Sarah Yates (DeKalb)** entered the finals with Gerhard taking **fifth place** and Blume placing **eighth** in the individual category. The same team earned first place in the written section of the Regional competition last month.

The Future Problem-Solving Bowl presents students with issues of concern or potential concern to the future of mankind. The teams of students then use various resources in oral and written

exercises to present possible solutions. Students are given one hour to make an oral presentation or two hours for the written category. Teams entering the state finals researched issues surrounding the problem of endangered species. The Chicago Regional competition called for the 25 to 30 schools entering to prepare possible solutions for the erosion of Lake Michigan and the scarcity of water in the Chicago area.

For the regionals, the IMSA team wrote out an ad campaign educating the public on the water shortage problem and included a hotline as part of the campaign giving consumers tips on saving water. In the Oral competition, a different team acted out a solution using the allegory of "The Three Little Pigs." With only preassigned materials as resources, they constructed costumes ranging from pig snouts to a wig within the one-hour limit. The Orals team

placed first in their category.

According to team advisor and social studies teacher, **Bernard Hollister**, IMSA had the only team with all sophomores competing in the senior division. He says the team going downstate had one month to prepare for the finals, where other schools have been preparing for as long as two years. "I am very elated about our showing," says Hollister and adds he is pleased with the strength of the students in the social sciences at IMSA. **"It is gratifying to know that the Academy is getting recognition, not only in its math and science departments, but also in the humanities."**

In the March regional competition, three IMSA teams placed among the top six winners for the written portion. One team placed first. Two took first and second in the Oral presentations.

IMSA's Junior Scholars

The IMSA Admissions office initiated a new program to recognize outstanding mathematics students. About 18 sixth and seventh graders were identified for the IMSA Junior Scholars program in this its first year.

Students are selected through the Educational Service Centers across the state. The selection is made from first-time participants in the Talent Search Program and the one with the top score in mathematics.

The 18 students participated in a two-day intensive experience at the Academy that included an introduction to the school's program and dormitory life. The Junior Scholars had an opportunity to meet with their peers from around the state and were matched with IMSA students who served as their "hosts."

The students received an IMSA T-shirt and certificate marking their significant achievement. Students invited to the Junior Scholars program on May 15th, included:

Kent Barbay - Murphysboro Junior H.S., Murphysboro
Aaron Bish - Mattoon Junior H.S., Mattoon
Matthew Bole - Longfellow, Oak Park
Eugene Foss - Unit District 35, Flora



Some of the Junior Scholars on visit to IMSA. Pictured top row, from left, Joseph Kent Barbay, Austin Krumpfes, George Longfellow, Eugene Foss. Middle - Matt Herman, Scott Lenser, Scott Rifkin, Steven Frederickson. Bottom - Allan Ho, Matt Boles, Vincent Schleitwiler, Aalok Kache, Daniel Maidman.

Steven Frederickson - Highland School, Libertyville
Francis Alenghat - Parker Junior H.S., Homewood-Flossmoor
Matthew Hermann - Immaculate Conception, Columbia
Allan Ho - Pioneer Junior H.S., Peoria
Aalok Kacha - St. Mark's, Bettendorf, Ia

Austin Krumpfes - Butler, Oak Brook
Scott Lenser - Dubois, Springfield
George Longfellow - Hoopeston-East Lynn, Hoopeston
Cliff Myers - Macomb
Scott Rifkin - Martin Luther King, Rockford
Nathan Sauder - Roanoke
Jill Smith - Murphysboro

IMSA Math Scoring High!

The Illinois Mathematics and Science Academy is **ranked number one** in mathematics among small schools in the state. The ranking comes as a result of tabulations from the American High School Mathematics Examination (AHSME). About 22,000 students from 248 schools in Illinois participated in the 38th Annual Examination. **Steve Collins (9th grade, Waukegan) placed 2nd among all ninth grade students and 22nd among all students** taking the test. (While most IMSA students entered at the sophomore level, some eighth grade applicants were accepted last year.)

The combined team score placed IMSA in the top 10% of all schools in the state by having the **15th best score in the state**. Ten students qualified for the Honor Roll after taking the test and scoring over 100 points. The ten qualified to take the American Invitational Mathematics Examination (AIME), competing against mostly juniors and seniors. They were: **Steve Collins (Waukegan), Sam Choi (Lisle), Paul Ivsin (Elk Grove Village), Jordan Koss (Northbrook), Young Lee (Joliet), Laura Kozlevcar (Peoria), Gabriel Demombynes (Hinsdale), Lillian Kao (Elmhurst), Andy Alt (Aurora) and David Joerg (Batavia).**

Eighteen students are listed on the Merit Roll for scoring over 90 points on the AHSME Exam. They include: **Doug Turnbull (Urbana), Peter Gast (Naperville), Erik Rothbaum (Peoria), Ted Lizak (Palatine), Ray Dames (Wilmetton), Mark Armantrout (Mattoon), Wayming Wu (Downers Grove), Frank Lai (Elk Grove Village), Andy Oh (Springfield), Stephen Moore (Bloomington), Cheryl Heinz (Westchester), Paul Lee (Peoria), Clay Young (Carbondale), Amy Courtin (West Chicago), Ronjon Paul (Oak Brook), Ann Ashenfelder (Wheaton), Nick Bullinger (Sleepy Hollow) and Ron McKenzie (Carmi).**

Math Teachers Sue Eddins and Chuck Hamberg have been working with the students. Both say they look forward to working with the students next year and with the incoming class. According to Hamberg next year should be even more exciting as the students gain experience in competitions.

The Search for the Class of '90

The review of applications and selection for the next class admitted to the Illinois Mathematics and Science Academy began in April and ended in June. A committee of 27 educators and business professionals from around the state met recently at the Aurora facility to kickoff the selection process. As members of the Student Review Committee, they were charged with the task of rating the 870 applications of students seeking admission to the three-year program.

All applications were read and rated by three members of the committee. The resulting evaluations were added to test scores and grade-point averages to compute an overall admissions score. The selection process is designed to identify the most talented students and guarantee equity of access to students representing the diverse population of Illinois.

According to Dean of Admissions, Dr. LuAnn Smith, "Membership on the Student Review Committee was determined by nomination from the leadership of various educational organizations." The organizations represented mathematics and science teachers, school administrators and counselors. Some organizations making nominations included the Illinois Committee on Black Student Concerns in Higher Education, the YMCA of the U.S.A. and the IMSA faculty and residential life staff.

The Student Review Committee met for three days starting April 30th. Successful applicants were contacted during June. Members serving on the committee included:

Charles W. Beirne, Chicago

The Chicago Public Schools

Louise Bock, Vernon Hills

The Illinois Council of Teachers
of Mathematics

Edwin R. Clarke II, Lake Forest

The Illinois Chamber of Commerce

John D. Court, Sleepy Hollow

The Illinois Principal's Association

Maralyn Curry, Canton

The Illinois Association for
Counseling and Development

Clarice C. Boxwell, Shorewood

The Illinois Committee on Black
Student Concerns

Bill Gibbs, Watseka

The Illinois Association for
Counseling and Development

Marmon Gibson, Chicago

The Chicago Public Schools

Judith R. Grisamore, Lake Forest

The Northern Illinois Planning
Commission for Gifted Education

Jennifer Grogg, Eureka

The Illinois Science Teachers Association

Richard Hanke, St. Charles

The Illinois Association for Supervision
and Curriculum Development

James Hanson, Batavia

The Illinois Association of Regional
Superintendents of Schools

Robert Hawthorne II, Rock Island

The Illinois Committee on Black Student
Concerns in Higher Education

Bernard C. Hollister, Glen Ellyn

The Illinois Mathematics and Science Academy

Wesley Heyduck, Fairfield

The Illinois Science Teachers Association

Chris Kawa, Batavia

The Illinois Mathematics and Science Academy

William J. Kearney, Evanston

The Illinois State Chamber of Commerce,
Hanover Park

Dr. Thomas J. Kucera

The American Chemical Society

Willie May, Chicago

Chicago Public School District #1

Eric McLaren, Aurora

The Illinois Mathematics and Science Academy

Larry Saler, Olney

The Illinois Council for the Gifted

Sandra Schmulbach, Glenview

The Educational Service Centers Gifted
Ed Consultants

Denise Sparrow, North Carolina

The Illinois Mathematics and Science Academy

Dr. Thomas TenHoeve, DesPlaines

The Illinois Community College Board

Dean Van Diver, Springfield

The Illinois Association for Counseling
and Development

Saturday Seminar: Chicago's Ethnic Heritage

Every month IMSA students are required to stay at the Academy for a Saturday Seminar. The seminars have varied from hearing Dr. Larry Schmarr lecture on the Cray Supercomputer at The University of Illinois to the social studies department leading students in a simulation of a constitutional convention.

In April, the Foreign Language Department combined strengths and efforts for three separate ethnic tours as part of the seminar series. The students started their day with an orchestral presentation by some of our own musicians. They were then prepared for a day of foreign cultures with an introductory les-

son of ten ethnic dances (including African, Israeli, German, French, Mexican and Greek dances) taught by a professional dance instructor.

Students bounded out of IMSA into Chicago headed in three different directions. One of the tours headed by German teacher, **John Stark**, visited the **DuSable Afro-American Museum** in the Hyde Park area. They also visited the Chinese American League, a small museum in Chinatown, where a tour guide talked to the group and taught them a few words of Chinese. The museum visit was followed by lunch at the Chinese restaurant "**The Junk**."

A second group led by Spanish teacher

Lena Lucietto visited the **National Czechoslovakian Sokol Headquarters**, a place where Eastern European students learn dance and gymnastics. The group then was treated to a Czechoslovakian lunch at **Klass' Restaurant** in Berwyn.

Another group of students visited the **Polish American Museum**, an old house transformed into a museum. The museum contains artifacts and documents showing roles that Polish people have played in U.S. history, dating back to the revolution. Students had a taste of Polish food at **The Orbit Restaurant** on Milwaukee Avenue. They even got a headstart on Easter with a lesson on painting eggs at a Lithuanian museum.

IMSA Scheint in Chicago!

Several IMSA students studying German did shine as they placed second in the High School German competition sponsored by the University of Illinois-Chicago campus. Six IMSA students participated in the skit category of the German Day contest in April. About 20 schools from the northern Illinois region entered each of the three categories that included poetry and interpretive readings.

IMSA placed second in the skit section of the contest with a revised version of the German "*Lorelei*" legend by **Heinrich Heine**. Students **Andy Alt (Aurora)**, **Dave Kung (Carbondale)**, **Dan Frakes (Seneca)**, **Maggie Taylor (Peoria)**, **Clay Young (Carbondale)**, and **Jennifer Schwartz (Lake Villa)** as Lorelei, rewrote the legend into a contemporary story.

"I was impressed with the creativity of the students," says instructor **John Stark**. "They really put a lot into the skit."

The original legend tells the story of a young German woman waiting for her lover to return home from the war. As the young man returns his ship sinks and both he and Lorelei drown as she attempts to save him. Legend has it that Lorelei sits on a cliff on the Rhine River combing her long blond hair as she sings a haunting melody, distracting shippers and drawing them to the peri-

IMSA Recommended for Grant

IMSA is being recommended for an Artists-In-Education (AIE) grant. A panel of the Illinois Arts Council which reviews sponsor applications for the AIE program met and is recommending an award of \$5200 for a four month dance residency with **Julie Salk**.

According to **Dr. Neill Clark**, English instructor at IMSA and the proponent of the grant, the award will be used to establish a year-long theme at the Academy studying the connection between arts and science. The point of connection will be the metaphor in language and mythology and the model in scientific theory.

Observations of the regular motions of the heavenly bodies and celebration of this recognition in music, dance and ceremony is the common origin of art and science. "**Equinox to Solstice**", the theme of the project, will focus this study through dance-theatre performan-

ces at the autumnal equinox and the winter solstice. The performances will be directed by **Salk**.

Clark says there is a link between the earliest cosmological studies and the most contemporary scientific explorations of space and subatomic particles. "As man watched what appeared to be the sun's path through the heavens, he learned also to calculate, to compute the movements and out of that came calendars and measurements. Yet, it (the knowledge) was preserved in the ceremonies of religion, in the stories of mythology and performed as dance according to the local customs and music."

Clark says the grant will signify the coming together of art, science, mathematics and the humanities. The goal is to present a unification of all knowledge in one place as an interdisciplinary approach to education.

lous cliffs, avenging her lover's death. IMSA students revised the story and set it in modern Germany, where Lorelei awaits the return of her lover due to arrive by bus.

Portia Blume (Utica), **Kathy Rink (Murphysboro)** and **Doug Turnbull (Urbana)** took third place in poetry reading. The three selected "*Willkommen Und Abscheid*" by J.W. Goethe. An interpretive reading was also presented by

students **Jill Howk (Melvin)**, **Karen Kiener (Palatine)** and **Jody Yates (Fowler)**.

Participants in the contest were treated to the sounds of the IMSA String Sextet by students **Andy Alt (Aurora)**, **Chris Bullinger** and **Nick Bullinger (Sleepy Hollow)**, **Matt Hausken (Lombard)**, **David Kung (Carbondale)** and **Lydia Leong (Wheaton)**.



"Representative" David Yung confers with another student during the 38th Youth Legislature Day in Springfield.

A Taste of Springfield for IMSA's Would-Be Lawyers

Throughout the Illinois Capitol Building, legislators, judges, attorneys, and the Governor's staff were at work. A normal day in Springfield? The arguments, debates, and compromises sounded familiar but each was being offered by an Illinois high school student.

Eleven hundred students filled the House and Senate chambers, courtrooms in the Supreme Court Building, and the Governor's office in March as the 38th Youth Legislature convened under the sponsorship of the Illinois YMCA. Twenty-nine of the young legislators and attorneys were from IMSA.

Under the sponsorship of the Aurora YMCA, the following students got a first hand look at state government:

Frank Borrás - lobbyist
Todd Laufenberg - lobbyist
Gabriel Demombynes - video press
Jim Kingery - attorney
Chris Posega - attorney
Mitchell Gordon - senator
Jennifer Schwartz - attorney
Amy Courtin - attorney
Terri Willard - senator
Maggie Taylor - lobbyist
Bill Grebner - attorney
Wendy Hansen - attorney
Badri Rengarajan - lobbyist
Robert Chang - representative
Paul Capriotti - representative

Kellie Van Housen - senator
Sona Nadenichek - representative
Kevin Munoz - representative
David Yung - representative
Sal Schulze - senator
Efie Saranteas - representative
Jeffrey Young - video press
Steve Moore - video press
Bowen Chung - video press
Kristine Gerhard - video press
Debbie O'Fallon - video press
David Franklin - video press
Jeff Truitt - attorney
Andy Oh - representative

The "Youth in Government" project began in October with the selection of students. Under the direction of project advisors Corinn Wallace, Copley Hospital, Judy Ellertson from the Aurora YMCA, and Bill Stepien, IMSA social science teacher, students drafted bills for introduction to the youth legislature, prepared lobbyists positions, learned the techniques of video journalism, and prepared to defend their client in a mock trial.

As the winter months passed, a mock trial was held at the Kane County Courthouse and legislators met at area high schools to guide their bills through committee hearings. As the Springfield weekend neared, preparations went into high gear. Aurora attorneys Paul Patricoski and Richard Petesch helped IMSA attorneys prepare their appeals for the Supreme Court. Illinois Representative Jill Zwick talked with students about the dynamics of the legislative process. And then it was off to Springfield.

Each day was packed with legislative sessions, committee meetings, courtroom arguments, buttonholing by lobbyists, and politicking. Friday ended with a formal banquet and Saturday with a dance. The news program which appeared on close circuit television each evening at the Holiday Inn and featured anchorwoman Debbie O'Fallon, was produced by the student video press, and covered the day's happenings at the capital. A weary bunch of students (and advisors!) left Springfield on Sunday afternoon determined to return in 1988 with "can't miss" legislation and scanning the horizon for golden arches.

Hollister Selected as Madison Fellow

Bernard Hollister (Glen Ellyn) social science teacher, has been chosen as a James Madison Fellow for 1987-88. He will be a member of a group of American history, government and civics teachers chosen nationally for a conference this summer. The fellowships are very competitive with only about 20 teachers selected from the east coast and another 20 from the west coast as recipients.

Each fellow receives a \$2500 Award, as well as travel support and expenses for a three-week seminar beginning June 22, 1987. The seminar provides the teachers with resources to organize programs in their community in connection with the Bicentennial celebration of the United States Constitution. The teachers

serve as spokesmen for their regions and states in disseminating information on the Constitution and planning programs for the Bicentennial celebration through 1991.

"I'm extremely pleased and excited! I've always been interested in the Constitution as an historical document," says Hollister who recently visited Williamsburg for a meeting on the Bicentennial plans.

Among his many accomplishments, Hollister is also the new president of the West Suburban Council of Social Studies, one of the oldest social studies councils in the state. He led the group on teaching strategies for the Constitution.

He is an accomplished author of instructional texts and editor of educational publications, including contributions to *A World History: Links Across Time and Place* (McDougal, Littell & Co.) and was one of four writers for the Teacher's Manual. He is also the author of *The Mass Media Workbook* (National Textbook Co.), now in its second printing.

He is the recipient of the National Science Foundation Grant, the National Endowment for Humanities Fellowship and the Williamsburg Award for Study at Colonial Williamsburg. This is his 24th year in teaching.

New Dorms. . .New Lifestyle!

"Mom, over here! Can you help me carry this?"

"Have you seen my journal?"

"Chris, what room are you in?"

Those were some of the cries heard over and over as students moved their belongings from the school building into the new dorms. After eight months of living in converted lab and music rooms, students and their resident counselors moved into the more traditional residential setting in mid-April. Some students were better prepared than others.

"I had all my stuff packed before," says **Andy Chen**.

"It was chaotic!" says **Eleanore Kim**. "I amassed so much stuff in a few months!"

Some students do miss the old camaraderie that developed from living in close proximity with twenty to thirty other people. "There's less closeness as a school," comments Chen, "but people are becoming better friends with their roommates."

And, it didn't take long for students to discover the advantages of living in the new dorms and the conveniences. "I can stay in bed an extra five minutes," says Kim, "Before we had to run to the showers (in the gym) and back to our rooms."

The novelty of living in a new envi-

ronment led to a lot of excitement and activity as students tried to make the new rooms feel more like home. For several days after the move students tried to continue the closeness with their peers by talking to each other on the phone into the wee hours. "We discovered the party line!" said one student. But, after the newness wore off, the late night calls lessened. "It's still nice to know you can call out or hear from home at any hour," says **Erika Tracy**.

"The excitement has died down," says resident counselor **Denise Sparrow**. "It's been replaced by an appreciation that they have received something special."

"It's very exciting!" says mom **Nancy**

Joerg. "It's been talked about for a long time and now it's beautiful to see the sunshine coming in through the windows and seeing the children filling the rooms."

As the year ended, students prepared for finals in their new rooms with a few reflecting on these past ten months of residential living. The pioneering year has given students a new educational experience where they learned as much from each other as they did in the classroom.

"It's been a good experience living here," says Kim, "now, I can't imagine going to school anywhere else."



Students enter one of the newly constructed dormitories. Dorms for next year's class are under construction.

Myths as Modern Metaphors for English Students

How do modern film and classical literature come together for the study of world literature? Tying the contemporary to more traditional concepts and literature has been the aim of English instructors Dr. Dana Goodman and Dr. Neill Clark at IMSA.

A visit by screenwriter **Leon Capetanos** (who collaborated with director Paul Mazursky on "The Tempest", "Moscow On the Hudson", "Down And Out in Beverly Hills") in May capped a semester's study of world pictures by students. This visit was in conjunction with the study of Shakespeare's *The Tempest*. Capetanos addressed the question of why one makes a movie about contemporary situations that allude to and draw on a Shakespearean play.

Capetanos' visit was the climax to a

study on the Elizabethan period. Students learned about the *Tempest* by preparing a performance of one of the scenes as a group project. The project was followed by study of E.M.W. Tillyard's work about the Elizabethan Renaissance, *The Elizabethan World Picture*. According to Clark, it is difficult material dealing with three different major metaphors in the literary work of Shakespeare and going back to classical times:

- the great chain of being
- the corresponding planes, and
- the Cosmic Dance.

The students were required to write a scene based on one of the metaphors. Through performance they had to put to use what they had learned by reinterpret-

ing some key Elizabethan concepts.

"Our objective was to teach the backgrounds of Elizabethan literature," says Clark, "which is really the background of all literature, and yet do it in a way that is not rote memorization."

"The study of myth as recurring images and metaphors becomes the foundation upon which to explore the literatures of the world in the junior year," summarizes Dr. Dana Goodman, English instructor.

Visits by Capetanos and other writers and poets were only the beginning of what is expected to be a pattern of bringing the artist and student together in the IMSA humanities program.

Math Teacher on State Panel

An IMSA math teacher was named to participate in an assessment writing workshop for the state of Illinois. **Sue Eddins (Glen Ellyn)** assisted the state by conducting data gathering efforts. The first step in the process had Eddins attending a workshop in April at Illinois State University. She and other teachers across the state will now conduct similar seminars in their local areas.

A total of 80 teachers from across the state were invited to participate in the project, tentatively titled "Mathematics Assessment Writing Workshop." Eddins was selected for the workshop and project by **Dr. John Dossey**, President of the National Council of Teachers of Mathematics, and officials with the Illinois Board of Education.

According to **Boon Lee**, with the student assessment section of the Board of Education, the workshop stems from education reform legislation passed in 1985. The legislation contains a significant emphasis on student assessment.

The teachers received background about mathematics goals, and learned how to conduct similar workshops at Educational Service Centers in their local district. According to officials, a workshop for science assessment is also being planned.

Language Students Earn Honors!

The humanities are an important part of the IMSA curriculum. Students are required to take one of five languages offered—French, Spanish, German, Latin or Russian. A sixth language, Japanese, will be added to the curriculum beginning next year. Students demonstrated their skills by earning top honors in national high school language exams. Several participated in the Latin, German and Spanish exams, with a few scoring in the top ten percent nationally.

In the French Exam, sponsored by the American Association of Teachers in French, two IMSA students scored above the 90th percentile. **John Dexter (Crescent City)** scored at the 96th percentile, meaning that only four percent of students taking the test nationally scored higher. **Eleanore Kim (Pekin)** scored at 93. Both received a Certificate d'Honneur.

The tenth annual Latin exam, sponsored by the American Classical League/National Junior Classical, drew over 61,000 participants. Receiving a Maxima Cum Laude certificate, and a silver medal is **George Chadderdon (Galesburg)**. Chadderdon, scored more than thirty out of a possible forty points in the exam. Ninety percent of the IMSA students scored above the national average.

Receiving Cum Laude certificates are: **Chris Caruso (East Peoria)**, **Sophia Davenport (Macomb)**, **Richard Dunham (Aurora)**, **Chris Dunlap (Milan)**, **Jodi Gottman (Champaign)**, **David Reed (Rock Island)**, **Steven Roman (Aurora)**, and **Sharon Sundy (Mahomet)**. The students received their instruction from **Rosalind Moore (Batavia)**.

IMSA students of German also fared very well in the National High School Exam sponsored by the American Association of Teachers in German. Five IMSA students scored in the top ten percent and four students received special recognition from two German agencies.

Top scorer on the exam was **Portia Blume (Utica)** with a 96 percentile rating. **Paul Ivsin (Elk Grove Village)** and **Clay Young (Carbondale)** each scored at the 94th percentile. **Andy Harrison (Naperville)** scored 93 and **Elizabeth Doyle (Springfield)** scored at the 90th percentile.

Four students received certificates from the Consulate General of the Federal Republic of Germany and the Goethe Institute of Chicago for extraordinary efforts in the German language. The four students are: **Mark Armantrout (Mattoon)** for the beginning level; **Portia Blume** and **Clay Young** for intermediate; and **Jody Yates (Fowler)** for the advanced level.

TRAILBLAZERS...

Dr. Neill Clark, English teacher has published two review articles in *New York Newsday*. In the article appearing in the April 26 issue, Clark explores the study of the Arthurian legend, and the historical and mythical realities that have fascinated writers and scholars alike for centuries.

"The Search for the 'Real' King Arthur" summarizes the observations of writers Richard Barber author of *KING ARTHUR: Hero and Legend* and those of Emma Jung and Marie-Louise Von Franz authors of *The Grail Legend*. Clark's analysis of the two books, raises the question that perhaps beyond the search for the historical or the mythical there is also the existence of the "living myth". That, perhaps, the study of historical evidence and poetic evidence requires the inclusion of each as ongoing processes shaping the legend of Arthur or any literary figure.

Mythological explorations are also at the crux of Clark's analysis of *The Inner Reaches of Outer Space: Metaphor as Myth and as Religion*, by Joseph Campbell. Clark again points to 'new age' type of thinking: one incorporating the study of mythological symbolism with scientific and measurable knowledge. He concludes that "Campbell's vision for a new age as one world rendered perceptible by scientific and technological means yet comprehended through mythology and integrated through metaphor has important implications for an educational system blinded by the light of special disciplines."

Bill Stepien, social science instructor and Director of the Information Resource Center, has published three books and an article in *The Senior Economist*, this year.

In the Fall, 1986 issue of *The Senior Economist*, Stepien and co-author Peter Senn, Professor Emeritus of Economics at Wilbur Wright College, wrote "The Constitution: An Economic Framework." The article outlines teaching techniques and activities for educating students on the economic impact of the document. The article suggests teachers explore the problems the nation faced under the Articles of Confederation with an economically weak government and a large

war debt. Among the several activities is the recommendation that students participate in role-playing where they consider the economic impact of various pieces of legislation.

Discovering Illinois is a 1986 textbook publication by Gibbs M. Smith, Inc. The elementary level text by **Stepien**, and co-authors **Ida Fisher**, **John Lewis** and **Mary Smoot** is designed to introduce the student to the state's geography, history, people, culture and government.

In *The World of Economics* (South-Western Publishing Co., 1988), Stepien and co-authors **John Lewis**, President of the Illinois Council on Economic Education at Northern Illinois University and **Peter Senn** provide an instructional package for exploring economic concepts and real-world situations. The text uses the combination of print material, computerized tutorials, simulations and other activities to work with students on the same set of concepts. The instructional package includes:

1. text featuring economic concepts and work sheets for concept reinforcement and review;
2. mastery learning tutorials on computer diskettes coordinated with the text;
3. simulation activities on computer disc highlighting the relationships among economic concepts in the text.

Earlier this year, Stepien and Smoot also co-authored a Teacher's Kit for the film "*History Matters: A Story of Change*." The kit assists teachers in studying the concepts of the award-winning film about a farmer and his daughter-in-law making major investment decisions. It teaches students by using a conceptual approach to decision-making through knowledge of the past. The kit lists objectives and activities for students.

Physics teacher, **Dr. David Workman**, presented the Jackson Memorial Lectures at Eureka College in April. The afternoon presentation to the combined faculty of the College was entitled "A Curriculum for the 21st Century". Dr. Workman also addressed the entire college community on "Special Education for the Gifted - Best for Them, Best for Us."



A handcuffed **Joe Meyer** is led away by Aurora Police officers as part of the "Cardiac Arrest" project sponsored by The American Heart Association. IMSA raised \$250.00 to bail out its principal.

Cheryl McGuirk, IMSA social worker and students in the Peer Counseling Club have some excellent ideas for helping new students adjust to IMSA next fall. They met during May to plan ways to implement the ideas and the club's program next year. Students will participate in the orientation process with parents and new students.

Jennie Saunders-Brown, orchestra and choral instructor at IMSA, was recognized by the Kane County Educational Service Region as "Specialist Educator of the Year." Brown, a K-12 music teacher for the West Aurora school district was nominated by peers to the county's Selection Committee as an outstanding educator. She was honored at a special reception recognizing three other award recipients on May 13th.

Michael Sloan, the author of *Working with Works*, (Scott, Foresman & Company), conducted several sections of a Macintosh class using the popular software program Microsoft Works. Microsoft donated 24 copies of the program to the Academy. The six one hour classes were offered during the late afternoon on Tuesdays and Thursdays.

TRAILBLAZERS. . .

The Freedom Shrine, currently on display at the Illinois Mathematics and Science Academy, was officially rededicated to the school in April. Members of the **Aurora Exchange Club** held their regular monthly meeting at the Academy to make the special presentation. The Freedom Shrine had originally been presented to the West Aurora School District for display at its North Campus, now the IMSA facility.

Keynote speaker for the presentation was **Bernard Hollister (Glen Ellyn)**, social science teacher.



In May, about 15 students participated in a total immersion weekend at Williams Bay, Wisconsin on Lake Geneva. During the weekend participants were forbidden to speak anything but Spanish. According to instructor **Elia Lopez**, "It was great to see that many students participating. These students really got a lot out of it."

The weekend was coordinated through Illinois Benedictine College. Seven students in the Spanish I class also attended the weekend event. According to Lopez it was an honor to have first year students allowed on the weekend as officials seldom admit students with less than two years of Spanish.



IMSA hosted **Chemistry West** in April as part of the Outreach program. Chemistry West represents a group of chemistry teachers from the Chicago area who meet six times a year to discuss current areas of interest to chemistry teachers.

Generally a topic or theme is chosen and teachers are encouraged to bring something they can share with others relevant to that topic. These could be experiments, demonstrations, or unique teaching techniques that experienced chemistry teachers have found work for them.



Some of the 82 students who recently visited Springfield during the recent Lobby Day, sponsored by the IASB and the LASBO. The students gained first-hand experience about lobbying as they made contact with their local Representatives and Senators, sharing with the legislators some of their experiences at IMSA.



Illinois Mathematics and Science Academy
1500 West Sullivan Road
Aurora, Illinois 60506-1039

NON PROFIT ORG. BULK RATE U.S. POSTAGE PAID AURORA, IL PERMIT NO. 129
